

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph number [0005] with the following rewritten paragraph:

A1 [0005] In accordance with the present invention, a security reversible key has an assigned cylinder, a locking system has security reversible keys with assigned cylinders, and a method is provided to manufacture such keys. ~~in accordance with claim 19.~~ With the new additional security element "blocking code", which comprises a coded blocking groove and an assigned pair of blocking tumbler pins, without any additional space requirement on the key and in the cylinder, i.e., with the existing coding positions on the key and the existing pin rows and positions in the cylinder, an additional insertion blocking system as well as a higher number of permutations and applications are achieved. With the division into areas on the key, whereby the first area with additional security elements defines an unequivocal segmentation into independent market areas, a system is created that corresponds to the above named objective and which can be realized with the new, multi-step manufacturing process.

Please replace paragraph number [0031] with the following rewritten paragraph:

B2 [0031] Fig. 1a, as an example, illustrates a safety turning-key S with four pin rows A1 to A4 and with 22 coding positions P_i, each one for a bore pattern left (L) and a bore pattern right (R). The coding row A2 on the key S here has the positions R1 to R5 for

B2 the bore pattern R and the positions L6 to L11 for the bore pattern L. On the keys, all positions of both bore patterns can be coded. For example, there are keys with bore pattern left, keys with bore pattern right and also keys with the two bore patterns R + L. In the assigned cylinder Z, however, for reasons of space for the pins, only every second position and, with this, only either a bore pattern R or a bore pattern L can be equipped with tumbler pins (in the same area). The first coding position P1 (= L11) on the tip of the key here corresponds to the rearmost tumbler pin position P1P1' in the cylinder with respect to the direction of insertion x of the key S.

Please replace paragraph number **[0035]** with the following rewritten paragraph:

B3 **[0035]** Fig. 1d illustrates the division into several independent market areas $M_i = M1, M2, \text{etc.}$, as well as the possible further sub-division of each market area into parts of market areas $M_{mi}MM_i$ on the key, which are, for example, correspond to independent distributor areas or fields of application for installations and objects, etc. The market areas M_i are defined with the area G1. The parts of areas MM_i can be defined with parts of the area G1 or also with parts of the area G2 or they can equally encompass parts of the areas G1 and G2.

Please replace paragraph number **[0038]** with the following rewritten paragraph:

B4 **[0038]** Fig. 2 schematically illustrates the method of operation of the blocking code

By BC in accordance with the invention on a key S and in an assigned cylinder Z. The directions in space are in the following designated with x, y, z, with x being the axis of the key and cylinder. The key has a blocking groove BN milled therein. The blocking groove BN runs parallel to the key axis x and extends at least up to the first coding position P1. In the assigned cylinder, correspondingly at least at the rearmost coding position P4P1', a pair of blocking tumbler pins is disposed. The blocking pins include a spring loaded blocking tumbler pin BZ and an extended blocking counter pin BG. The blocking groove has a coded blocking depth B1, B2, B3 and, in correspondence with this, the length lb of the pair of blocking tumbler pins (BZ + BG) is coded such that the length lb corresponds to the distance db of the blocking groove BN from the cylinder housing 10. In other words, the pair of blocking tumbler pins (or pair of blocking pins) fits in the blocking groove BN with little play. When inserting the key, the following sequence results (a - b - c): The blocking tumbler pin BZ is lifted at a beveled lead-in face 6 of the key up to the level of the blocking groove BN and with little play with the cylinder housing 10 passes through the blocking groove up to the corresponding coding position P1, whereby the blocking tumbler pin BZ is lowered into this first coding position with a certain coding step, here, e.g., C2. In this position P1 the pair of blocking tumbler pins BZ, BG operates as normal coding position with respect to turning of the cylinder, which in case of a correct coding has to release the shear line 9. If the blocking groove BN is not deep enough, such as when it has a wrong coding Bi, then the blocking counter pin BG impinges on the cylinder housing 10 and the further insertion of the key is blocked at the beveled lead-in face (if lb is larger than db, refer to

84 Fig. 8a). The blocking code therefore results in an additional security function, in that the complete insertion can be prevented with additional coding steps (Bi) of the blocking groove, whereby the coding function up until now at the position P1 is maintained. Over and above this, neither the key, (i.e., on the key positions) nor the cylinder requires additional space for the blocking code. In the cylinder simply an up until now the normal coding tumbler pin is replaced by the special blocking tumbler pin.

Please replace paragraph number **[0061]** with the following rewritten paragraph:

85 **[0061]** Fig. 18 illustrates an organization of the locking system in accordance with the invention with security reversible keys in a hierarchic schematic diagram. The system owner SS (e.g., a manufacturing company) represents the highest hierarchic level, which defines and authorizes the market areas $M_i = M_1, M_2, \text{etc.}$, on the key, whereby a market area may be correspond to a country or a general distributor. In the market areas, further parts of areas $M_{mi}MM_i$ are defined on the key and separated and may be, for example, for correspond to different distributors or installations within this area. A further level $MM_{i.i}$ can define individual objects. This is defined by the codings of the areas G1 and G2.
